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SOIL conservation

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It's a nice place to visit and I would like to live there . . .

Rural America has a lot of room and a lot of natural resources that can make life rewarding for more people. Making sure life is better is the aim of conservation action spelled out in this issue.

The lead article discusses pioneering conservation work in Coon Valley, Wis., and its long-term effect on the area. Elsewhere:

. In Idaho, milling of waste timber gives new economic spark to a small town;

. In Louisiana, erosion control saves an airport;

. In Utah, city youngsters learn the delight of a real farm;

. In Tennessee, a farm family improves the land instead of moving;

. In Texas, sprawling university lands are given better care for better grazing;

. In New Mexico, Indian drum-making turns from hobby to business;

. In Florida, a farm becomes a new community;

. In Oklahoma, a watershed lake becomes a recreation complex;

. In Wisconsin, landowners create new waterfowl habitat to bring back the birds; and

. In Hawaii, what the sugarcane mill doesn't want helps grow crops on lava.

COVER: An Oregon ranch, where the horizon is broken by a real cliff instead of the next apartment building.

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Coon Valley proves the claim

Modern soil and water conservation practices claim a number of birthplaces. One of them lies in western Wisconsin. Rich in history and beauty, the valley of Coon Creek and the people who live in it have seen the full cycle of resource development to disaster and back again.

Torger Gaardhammer came home to Coon Valley from the Civil War with a new idea. Down south he had seen farmers plowing furrows up-and-downhills, letting the rain wash out gullies deep enough to turn cattle. They replaced the need for

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Mr. and Mrs. Adolph Lee, early cooperators in the Coon Creek Demonstration Project.

fences. He tried it, and it worked . . . too well. He had to give up the idea because there was no way to stop the cuts from getting deeper and deeper and absorbing the entire farm.

Wheat had been the main crop in Coon Valley, and it had partly protected the land from erosion. But the shift to cattle brought a need for more pasture—and the clearing of steep slopes and grazing of woodlands. Even those who did not use Torger's idea had gullies because the water rushed down the hills too fast to be absorbed. By the early 1930's gullies, floods, and droughts were driving people from the farms.

"One time back in the late twenties we had three floods in 1 week," recalls Adolph Lee, one of the few valley pioneers still living on his farm near the town of Coon Valley. When he had moved there as a boy in 1898, he could jump Coon Creek wherever he chose.

In 1933, the Federal Government decided to help farmers solve soil and water problems. Hugh Hammond Bennett, world renowned "Father of Soil Conservation," asked R. H. Davis, superintendent of the La Crosse Erosion Experiment Station, to help him pick a site for a conservation demonstration project. Davis, Noble Clark, E. R. Jones, and Aldo Leopold of the University of Wisconsin College of Agriculture proposed Coon Valley, and Bennett designated it "Project No. 1"—the first in the Nation. Since the area was marked out on a watershed boundary, it also became the Nation's first small watershed project —long before the Small Watersheds Act of 1954 was passed. Orville Hays, who succeeded Davis, also was an early architect of the project.

In 1934 a Civilian Conservation Corps (CCC) Camp moved into Coon Valley to help landowners apply conservation practices. They built masonry gully-control structures, planted trees, improved woods and pastures, and laid out contour strips of row crops with grass between. Farmers were encouraged to plow across the slope with strips instead of up and down—an early example of contour stripcropping—as was being done in nearby Mormon Coulee. Although CCC labor helped, it was still mostly a job for each landowner.

The 92,000-acre watershed was divided into four units with a planner assigned to each: Herb Flueck, recently retired as Minnesota state conservationist; Marvin Schweers, who became state conservationist for Wisconsin; John Bollinger, who later farmed near Cochrane, Wis.; and Joe Schaenzer, who was with Rural Electrification Administration in Washington, D.C.

Adolph Lee was among the first to sign up for help. I. N. Knutson, Coon Valley banker and friend, encouraged him and many others to get into the program. Ben Einer, farmer and rural mail carrier, spread the word all along his route. Of the 800 farmers in the valley, more than half became cooperators.

Lessons learned here helped establish conservation practices across the Nation and around the world. At the 20th anniversary celebration in Coon Valley in 1955, Bennett, then retired as chief of SCS, said, "The success of Coon Valley rang bells around the world." The State Highway Commissioner unveiled a historical marker that day, proclaiming the valley "The Nation's First Watershed." Other oldtimers from across the Nation joined Bennett for a second look at the project, visiting 75 of the original farms that had received assistance. Almost all were continuing conservation practices.

Yet occasional flooding still occurred. In 1958 Coon Valley leaders asked SCS for another push toward flood prevention through Public Law 566, and a small watershed project was approved. Fourteen floodwater-detention structures, the last completed on June 30, 1966, now nestle in the upper reaches of the valley. Flood-free at last, many valley farmers have been able to use bottom lands for high value crops and tie down the hillsides with trees and grass. Here it was that conservationists learned it takes both upstream watershed treatment and floodwater dams to do the job.

A sawmill, water-powered until about 3 years ago, operates in the valley, using logs grown under management begun in the 1930's. Some of the original terraces show on

cropland fields, but many have been replaced with new systems of contour stripcropping fashioned during the project days. Some have been converted to diversions, oversized terraces carrying more water. More than 15 miles of new diversions were built during the Public Law 566 project days. Early planners urged dairymen to fence the woods and keep cattle out so new growth of trees and grass could protect the land; the practice is still followed. Foresters come here to study results of 35 years of conservation management.

Biologists recommended fencing streambanks so grass and shrubs would grow and make homes for wildlife. Later the Wisconsin Department of Natural Resources (formerly the Wisconsin Conservation Department) entered into contracts with the landowners to protect these areas.

Since floods have been controlled, trout fishing in Coon Creek is good again. Deer, almost extinct in 1930, are also plentiful. Hunters shot more than 600 last year. Ruffed grouse are in supply, although pheasants seem to be scarce.

Abandoned farms are scarce. Second and third generation farmers, many Norwegians along with Germans and Bohemians, are still there. Adolph Lee's son Burton now farms the land his father improved during the conservation-demonstration project days. When the land changes hands, it is usually bought by a neighbor to enlarge his holdings or is sold to new families attracted by the security they find in owning land. A ski slope along one of the bluffs attracts many winter sports enthusiasts, and a new summer home or two can be seen in the coulees.

Conservation-demonstration projects are no more. In 1938 "Big Hugh" Bennett helped shape legislation setting up state machinery to organize local soil and water conservation districts. Every state eventually passed a law keeping the conservation job under local leadership and, at the same time, spreading conservation throughout the country. There are now more than 3,000 of these districts in the 50 states and Caribbean Area. Each urges landowners to apply conservation measures, many of which were tried and proved in Coon Valley years ago.—JOHN M. CROSS AND MILLARD C. DAVIS, *information specialists, SCS, Lincoln, Nebr., and Madison, Wis.* ♦

Contour stripcropping in the Vernon District.

New ideas revive a town and an industry

By Gerald W. Yeoumans
District conservationist, SCS, St. Maries, Idaho

Six years ago, Calder, Idaho, a small town nestled in the St. Joe River valley, was scenic but dying. Today, it is scenic and growing. What made the difference?—people who care for their community and believe in resource improvement.

Calder, like many other small communities in the Idaho-Washington Resource Conservation and Development Project, grew up with the timber industry, flourished a while, then subsided as the virgin timber was cut and the industry went farther and farther back into the mountains for its supply. In 1965, only 85 people were left in the town. Employment in the timber industry was seasonal, and there were no jobs at all for women, young people, or those physically unable to stand the rigors of heavy logging.

Calder's new look can be traced to Bill and Bernice Jones. Moving to town in 1965 to purchase the general store, they saw an opportunity in expanding a small local cedar products mill. In 1966 they bought the mill and merged with Idaho Cedar Sales Company at Troy.

The next step was to mechanize the plant so that it could efficiently produce cedar shingles, stakes, rails, posts, and pickets. Cooperation with a local tractor company in Troy led to design and construction of specialized machinery. Production jumped dramatically, picket production doubled, and posts, rails, and other products increased fivefold. Employment at the Calder plant went from two to 10-18 people a shift. Extra shifts soon were needed to fill the demands created through marketing efforts.

Now there is employment opportunity for young and old. People who for some reason cannot work in the mill can do piece work at home. Idaho Cedar Company will deliver unfinished cedar bolts and purchase back the handmade pickets or posts. Women work in the mill, primarily in the picket section where lightweight work is available. During winter, when other logging jobs are shut down, extra shifts are put on to take advantage of the excess labor.

Cedar logs used in the mill are all "cull" logs that only 6 years ago were left to rot in the woods. Logs with as little as 3 inches of solid wood shell around a rotten center are usable. Thousands of dollars and days of employment have resulted from making a fire hazard into a valuable resource.

The effect on the community was dramatic too. Population jumped from 85 to 225. Eleven new houses were built. Every house in town now has a health department-approved septic tank and drainfield—only one acceptable system existed in 1965. There is a new community water supply—put in with a lot of volunteer labor by the townspeople to keep costs as low as possible. Four fire hydrants now provide Calder's first fire protection. The "one-room" schoolhouse has been expanded to a "two-room" schoolhouse to handle the first six grades of elementary education.

Calder isn't finished yet. RC&D cost-sharing funds will be used to build four structures on Bear Creek to protect the town from almost annual flooding. What next? Hard to say, but one thing is certain: The enthusiasm of the people of this little town will lead to something. ♦

With special equipment these cull cedar logs now can be used to make many specialty products.

Trailblazer 4 keeps planes flying

By Paul A. Miletello
District conservationist, SCS, Minden, La.

Planes are going down the runway at Minden Airport, Louisiana, instead of taxpayers' money going down the drain, thanks to the Trailblazer 4 Resource Conservation and Development Project.

Soil erosion threatened to destroy the $140,000 runway extension in early 1969. When the Airport Authority could not find enough funds for repairs, Warren Dietrich, its chairman, went to the RC&D Project sponsors for assistance. They turned to the Dorcheat Soil and Water Conservation District in Webster Parish and the Soil Conservation Service.

"The SCS not only agreed to take on the job," said Dietrich, "but city officials were informed that through the RC&D Project, SCS could share up to one-half the cost of stopping erosion on the airport."

The eroded areas were filled and smoothed, the slopes restored to their original condition, and several species of grasses planted to hold the soil in place. Straw mulch was applied to all seeded areas until the grass took hold. Drains at the ends of the slopes were lined with burlap, and two structures were put in to handle water runoff from the slopes. The erosion-control work now is completed.

Students of the Evergreen Presbyterian Vocational School helped install the two water-control structures and stabilize the slopes. The city of Minden and the Louisiana Department of Public Works paid the $5,500 local share of costs for the two structures and shaping and seeding.

"We believe that Minden now has one of the finest airports in a city our size," says Chairman Dietrich. "The efforts of the Trailblazer 4 RC&D Project, SCS, and the Dorcheat District have helped assure our airport a longer life." ♦

Minden Mayor Tom Colton (above left) discusses the airport's conservation plans with Claude O. West, Minden Airport Authority member, and Carl V. Thompson, SCS soil conservationist. Below left, boys from the Evergreen Presbyterian Vocational School apply mulch to a slope. Below right, the author checks seedbed preparation on one of the airport's cutback areas.

The wonder of a farm

By Earl Spendlove
District conservationist, Layton, Utah

Bright-eyed city youngsters from elementary and Headstart Program schools in Bountiful and Salt Lake City, Utah, have been coming to the Tom Williams farm for several years. They see, hear, touch, and smell the wonders of a farm. Farm animals are as much a novelty to these children as animals in a zoo, and farm equipment is as strange as a satellite.

The 400-acre dairy farm in Centerville, some 10 miles north of Salt Lake City, is owned and operated by Williams and his sons, Emery and Thomas, Jr. They milk 70 cows and maintain a herd of 80 calves, dry cows, heifers, and steers. The cattle, horses, rabbits, pigs, chickens—and a litter of kittens living between the bales of a straw stack— are a source of amusement and amazement to the youngsters from the city streets.

For some, seeing the strange animals is a frightening experience. A pen full of squealing pigs, or a horse or cow towering above them brings fear to their hearts. But the teachers usually can build the childrens' courage enough to reach out and touch the more gentle animals.

The children—usually ages 5 to 8—are full of questions about everything they encounter; their natural curiosity has not been stifled by adults who say, "Don't ask such silly questions." And on the Williams farm all questions, silly or not, are answered too.

According to Williams, not all the questions are asked by the students. A number of parents and volunteers come with each group to help supervise the children. Many of them have never been on a farm before, and their questions show their interest in farm life.

Williams, named Davis County's outstanding farmer in 1967, has been a supervisor of the Davis Soil

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"That baby cow loves me!" says a Headstart visitor (left), as Emory Williams holds the calf. Children hold on to the kittens (above) with Tom Williams.

Conservation District since its organization in 1952. With him, soil and water conservation is a way of life. He has leveled land, installed drains, and piped irrigation water to the head of the fields. His farm is arranged so that drainage and runoff water from the upper fields irrigates the land below. Crops are rotated, and full use is made of commercial fertilizer and barnyard manure.

Farming is a full-time job for Williams and his sons, but at least one of them manages to take time out to show the youngsters around. They feel everyone should know where his food comes from and realize the importance of making the best use of our soil and water. ♦

A farm family that stayed

Mr. and Mrs. Luther Carter, a rural Tennessee farm couple, with children to raise, thought about migrating to the city. They heard from friends and neighbors who did move that city life was not all that good. So they decided they would stick—even before they had land of their own. They saved their earnings from cotton-picking and vegetable harvesting until they could make a down-payment on a 63-acre farm in 1954.

"It seemed like it always took all the money we could make to send the children to school," Carter recalls, "and the soil on the farm was so eroded and poor that I rented extra land to try to make a little more money."

Each year the monthly payments were harder to meet, and Carter had to rent more and more land. All eight children, however, were graduated from high school, and two completed junior college in Memphis, thanks to the dedication and persistence of their parents.

The breakthrough came in 1965. Carter was accepted in a farm-management class organized for low-income farmers under the Manpower Training Act and sponsored by the Tennessee Department of Employment Security. Each trainee worked out a conservation plan for his farm with the help of the Soil Conservation Service. When Carter learned that his farm had soils as good as, if not better than, those on some of the land he rented, he decided to spend more time improving his own farm and less working on rented land. Each year he calls on the author to help him install practices.

Mrs. Carter actively supports her husband in his conservation work. "We need a new washing machine," Mrs. Carter says, "but it seems that we have to have a pond one year, fencing the next, and so on. So for 3 years I have done my washing by hand."

Now the eroded farm is healed with grass and trees. A scenic farm pond on a formerly gullied area has assured plenty of water for livestock and fishing. Where brush and briers once grew, cattle graze on improved pasture. The cropland is protected by diversion terraces.

In 1968 the Carters borrowed money through the Farmers Home Administration for a house to replace their old asphalt-shingle-sided dwelling. The new house stands on a grassy knoll. Electricity heats and cools the house, powers the kitchen, and pumps water. The sale of crops pays for the improvements on the farm. Many things still need to be done on the farm. But the Carters are happier than they have ever been.

"I took some of my grandchildren fishing in the pond a few days ago—and we are catching some that weigh 3 and 4 pounds," Mrs. Carter said.

"The remembrances of the hardships of the past make us doubly appreciate our advantages today," Carter said. "And we are real proud that we decided to stay on the farm."

—JOE BOSWELL, *district conservationist, SCS, Trenton, Tenn.* ♦

Two million acres of grass

Getting conservation applied to a wide expanse of privately operated public land can be a problem.

In Texas, a new no-nonsense conservation policy adopted by the University of Texas system is helping. The university handles 2.1 million acres of land set aside for higher education by the Texas Legislature nearly 100 years ago.

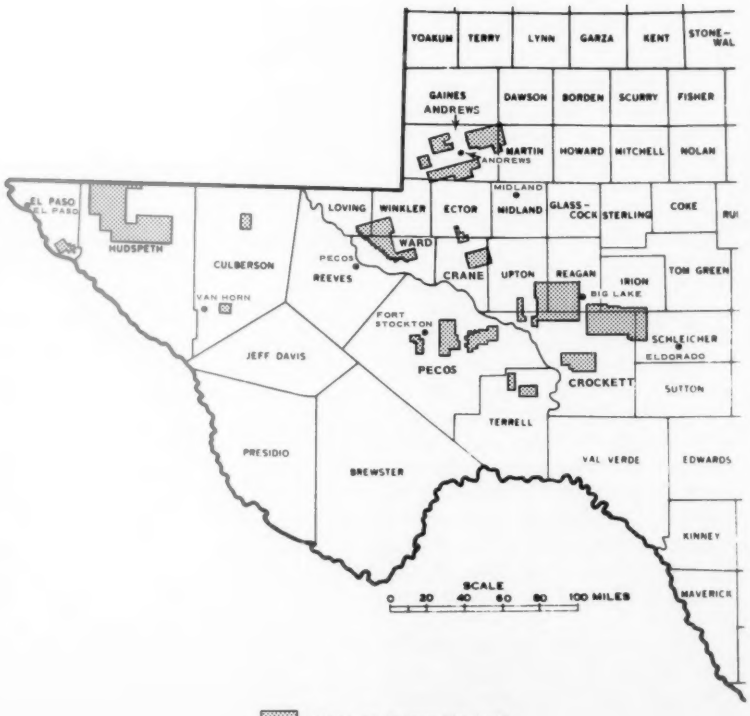
"The grass cover on our land has steadily deteriorated," Billy Carr, land agent and oil field supervisor for the university, said. "I happen to believe, however, that the time has come to start it back on the road to improvement; that's exactly what we have set out to do."

The land sprawls over 19 arid west Texas counties. Its 5,700 oil and gas wells have pumped nearly $600 million into a permanent fund. Invested by the university, the fund and the mineral resources have been managed well; but less careful grazing management and periodic droughts have gradually reduced the choice grasses once native to the area.

"We lease surface rights to 136 ranchers, or lessees," Carr said. "About 70 percent of these have tried to do at least a fair job of grassland management. We've always had about 30 percent, however, who were not taking good care of the land. And most of the others are not doing as good a job as we would have liked.

"To the layman, it might seem like a simple thing for us to require our lessees to take better care of the land," Carr said. "But it's not that simple unless you have a positive, well-planned program and someone to help carry it out."

Carr said that tracts given the university were areas that had not been homesteaded; a million acres was set aside in 1873 and in 1883. Early settlers took the land with creeks, springs, and watering holes, so the rancher who leases the university land has to provide livestock water and make other improvements at his own expense. And he still has to pay a competitive price for a



Land Agent Billy Carr (left), Ratliff, and SCS District Conservationist Bertsch discuss grassland management on the 50-section ranch Ratliff leases from the university system.

lease he may lose in a few years.

"With the help of the Soil Conservation Service and 11 soil and water conservation districts, we have figured out a way to solve our grassland-management problems," Carr said. "We started our program last year and it really looks promising."

The university's new conservation policy works like this:

As each long-term lease expires, the prospective lessee is told to contact the nearest SCS office for help in working out a complete conservation plan for the university land. An SCS conservationist and the rancher go over the land to determine the treatment it needs. The rancher selects the combination of measures he plans to install.

Next, the rancher and SCS man meet with Carr to discuss the conservation plan in detail. If Carr agrees that the plan meets the needs of the land and that it will result in improvement of university land, he approves it. Then the lessee has to agree to carry out the plan as a condition of his lease.

"In 1969, we made a major change in the way we handled surface damage payments," Carr pointed out. "Up until last year, oil and pipeline companies paid the lessee damages for oil, gas, and pipeline operations. Now we require that this money be sent to us. We keep it in escrow for the lessee and allow him to spend it for soil and water conservation work or for other improvements. This change wasn't very popular with our lessees at first, but it seems like the fairest way for us to help get this soil and water conservation work done."

Carr is requiring all lessees to plan and carry out at least two grassland-improvement practices. First, all the land must be given periodic rest from grazing. Usually, one-third of a lessee's unit is rested at least 3 months each growing season. The principle of proper grazing use must also be applied. Other commonly used practices include brush control, cross-fencing for better grazing management, and water developments for improved grazing distribution.

Duane Ratliff of Andrews is typical of the new style of conservationists who lease university lands. When his old lease expired in mid-1970, he enlisted the help of SCS District Conservationist Walter Bertsch in conservation planning on Ratliff's 50-section lease.

Under the plan, Ratliff has controlled 600 acres of moisture-robbing brush that had invaded one of the university's pastures. He also has piped water to a dry corner to aid grazing distribution. And he is resting one-third of the ranch every year.

"This seems to me to be a sound way to take care of university lands," Ratliff said when asked about the new conservation policy. "And we both gain by it. I make more money when I take good care of the grass, and the university makes more money when the lease value of the land increases."

Wildlife, scenic areas, and historical sites also get attention under the new policy. SCS helps Carr inventory and evaluate these resources and consider them in conservation planning.

Control and management of the University of Texas lands is vested in the university's Board of Regents. Board member Frank Ikard is chairman of the Land Investment Committee. Carr credits Ikard and Floyd O. Shelton, deputy vice chancellor for Investments, Trusts, and Lands, for helping get the new soil and water conservation policy established.

But Carr says it's the SCS technical help in planning and followup that make the new policy work on a day-to-day basis.—DALE D. ALLEN, *public information officer, SCS, Temple, Tex.* ♦

The drum trees

By Cary Hull
Woodland conservationist, SCS,
Albuquerque, N. Mex.

The mellow beat of Indian drums has been heard before in New Mexico's Northern Mountains, but this rhythmic thump, thump, may now be heard from Boston to Seattle and from Texas to Alaska.

Bob Brooks, who formerly made drums as a hobby, now is owner of the Taos Drum Company and makes drums for the commercial market. He employs from four to 12 Indians to help in logging, bookkeeping, hand painting, and filling orders. He has an annual payroll of approximately $20,000 and spends about $5,000 for equipment and supplies in the community. He plans to expand and eventually may employ 20 people and have an annual payroll of more than $80,000.

The Northern Rio Grande Resource Conservation and Development Project has helped him solve technical problems in gathering and curing the logs used and find markets for wood previously discarded as waste. Assistance to local sponsors of the RC&D Project is given by several USDA agencies, under the leadership of SCS.

How are his drums made? Aspen from the nearby mountains is used for the shell of smaller drums. Blocks of aspen wood are peeled of all bark and hollowed out until a shell about 1 inch thick remains. After the shell is trimmed so it will sit level, it dries in the air for 1 to 6 months. Then, the shells are sanded and covered with cowhide. The drum heads are scalloped and secured to the shell with rawhide lac-

An aspen becomes a drum: Felled trees are cut into lengths (left), bark is trimmed off (upper right), center is cut and chipped out, cowhide heads and laces are added. Bob Brooks displays the finished product.

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ing. In a few days the heads are dry and the tom-tom is complete. Some are then hand-painted.

Big drums are another story. Brooks is proud that "We produce the largest Indian drums in history." But he's the first to admit that large drums are a lot of work.

Douglas fir is preferred for the shell of large drums because it is strong and has little pitch. Logging crews are always looking for large fir trees, but they are difficult to find since the area has been logged several times.

One tree found 19 miles from town was reported to be the largest one cut in the area since 1905. Loggers probably had passed it by because it had a forked top and might have a rotten core. Drum company loggers had to use an old hand-drawn crosscut saw to fell the tree — power saws were not long enough for the 6-foot cut. The tree was solid to the core, and 17 blocks suitable for large drums were cut from it. Sawlogs obtained above the fork were sold to a local sawmill.

Work began on the big drums soon after the Douglas fir blocks were delivered. The 6-inch-thick bark was chopped off and the centers sawed and chipped out until only a ¾-inch shell remained. Metal bands were then tightened around the drums to minimize cracking and checking during the drying period. After this, they were processed similar to the smaller drums. The largest block made a finished drum 54 inches in diameter.

Brooks believes in using all the resources available to him. Long shavings made by the chain saw while cutting out center cores are used as packing material to protect drums during shipment. Larger pieces from fir cores make good fireplace wood. Sander dust is mixed with glue to make reinforcing material. He now faces the challenge of locating an outlet for the aspen cores.

Indians have been making drums for more than 400 years in New Mexico, but they have never seen authentic drums used in such innovative fashion—for coffee tables, lamps, stools, end tables, clocks, and other decorative pieces. School organizations, drum and bugle corps, cheerleaders, collectors, musical and dance groups, and Boy Scouts have found the tom-tom useful in their work too. From old beginnings come many new ideas. ♦

The bird business

A bird dog points, a quail flies, and a hunter shoots—a common chain reaction on the Lake Clopton Shooting Resort in Ellis County, Tex.

Pete Clopton and his wife Katherine are cooperators with the Ellis-Prairie Soil and Water Conservation District. They got into the shooting preserve business almost by accident. Clopton was born and raised on the 638-acre farm he operates. Before 1955, the whole acreage was devoted to cotton, alfalfa, small grain, and cattle.

In 1956, a dam was built across one of the main creeks on the farm, creating 45-acre Lake Clopton. The lake was stocked with bass, bluegill, and channel catfish, and fishing permits were sold to the public.

The interest shown in Lake Clopton by area sportsmen led the Cloptons in 1963 to start a shooting preserve of their own. The Soil Conservation Service provided technical help, particularly in developing vegetative cover. The Cloptons then bought their first laying stock of bobwhite quail. Although there is still fishing, the birds have taken most of Pete's time and acreage.

Today the Lake Clopton Hunting Resort is complete; it has its own layers, incubators, raising area, and flight pens for aging and exercising the birds, facilities to board and exercise 50 bird dogs throughout the year, guide service, seven hunting areas—and, of course, Lake Clopton itself. The Cloptons raised 12,000 bob white, 800 pheasants, and 1,200 chukar in 1969.

They admit the business is not easy. During the October-through-March shooting preserve season, theirs is a daylight-to-dark job, with up to seven parties hunting at a time. In off-season months, birds must be raised and tended. One compensation comes from the people they meet. Pete Clopton says, "Ninety-nine percent of the hunters are the nicest people you'll ever know."—W. L. WEDEL, *area engineer, SCS, Corsicana, Tex.* ♦

Up to 15,000 quail are produced in these pens each year.

Farm-for-sale ad changes a county

By John T. Barnes
RC&D Project coordinator, SCS, Bonifay, Fla.

A small classified advertisement 10 years ago in the *London Times* triggered a chain of events that has helped reverse migration from Holmes County, Fla. It also focused attention on an area virtually untouched by the recreation, tourism, and industrial forces that have affected the rest of the state.

C. L. Walker, an accountant in Billingsherst, Sussex, England, read the "farm for sale" ad Canadian owner Frank Joyce had placed in the newspaper. Walker made a quick flight to visit the farm, 6 miles northwest of Bonifay. He liked what he saw and bought it and adjoining land—800 acres in all.

The land is largely rolling hills and valleys. Working through the Holmes Creek Soil and Water Conservation District, the Soil Conservation Service helped Walker plan soil and water conservation practices for the property.

Walker built two lakes in 1963, one a shallow 5-acre lake and the other 35 acres and 19 feet deep near the dam. SCS engineers designed the lakes to use a draw or "saddle" across one of the hills as a natural spillway, eliminating the need for a manmade spillway at the dams. A canal large enough to accommodate small boats connects the two bodies of water, so one spillway serves both lakes. The lakes were stocked with bass, bream, and channel catfish by the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.

"I was delighted with the assistance given me by the various agencies," Walker said. "There is nothing in the United Kingdom comparable to the soil conservation district-Soil Conservation Service programs."

Walker's aim was to develop a place for people to live where the expression, "quality of living," would really mean something. About 1,000 tree-shaded homesites have been marked, and 25 beautiful new homes already are in the woods surrounded by dogwood that covers the slopes overlooking the lakes.

The beauty of the area also has led to recreational development. Newcomers and old residents formed the nonprofit Dogwood Lakes Recreational Organization to plan, finance, and build facilities. The 300-member group obtained a Farmers Home Administration loan, bought 150 acres of Walker's scenic hills, and constructed a community clubhouse, a 100-acre golf course, and a swimming pool.

"Development of west Florida is bound to happen," Walker says, "because of the area's climate, beauty, water supply, and other assets. I foresee it becoming a year-round resort region second to none in the country." ♦

New home, pool, and golf course at Dogwood Lakes Estates.

A lake and then some

"I guess our lake was the first one of its kind built in the Nation," said businessman and civic worker George A. Brown. The sparkling blue 23-acre lake a few miles north of Lindsay, Okla., looks like any other scenic lake. It has a dam, principal spillway, and a grassed emergency spillway. What sets the lake apart from hundreds of others along the Washita River Basin?—the paved access roads, picnic tables, grills, outdoor lighting, and other recreational facilities.

The lake is one of the first constructed under Public Law 566 to have recreation as a primary purpose.

"It's hard to believe that just a few short years ago this area was one of the most eroded upland farms in this part of the state," said Brown.

"We now have 50 to 75 people come out here every day to fish, picnic, hike, or just enjoy the beauty of this area." Some 4,000 people attended the fireworks display at the lake on July 4th.

The lake is one of 11 built in the Bear-Hybarger Creek Watershed Project. Sixty-three other subwatersheds comprise the historic Washita Basin that has received intensive conservation treatment since 1944. Supervisors of the McClain County and Garvin soil and water conservation districts began planning conservation treatment in the project as early as 1957. They and other conservation leaders formed the Bear-Hybarger Watershed Association and raised $30,000 in local funds to get the project underway.

The watershed work plan, completed by SCS in 1959, called for a single-purpose flood-prevention structure at the Lindsay site. About that time Brown and other members of the Golden Trend Golf Association came on the scene.

"We were just a bunch of golfers looking for a place to build a top-notch course," Brown said. "We had a chance to buy the land where the lake was planned and that's what we did.

"We found out that legislation had just been passed by the Congress that would permit SCS funds to be used in enlarging the lake and assisting with recreational facilities. We saw this as a real opportunity for our town and area."

For the new venture to qualify for Federal funds, the city of Lindsay became a cosponsor of the Bear-Hybarger Project. The city of 4,200 people now owns and operates the entire 185-acre recreational complex including the lake, adjoining area, and golf course.

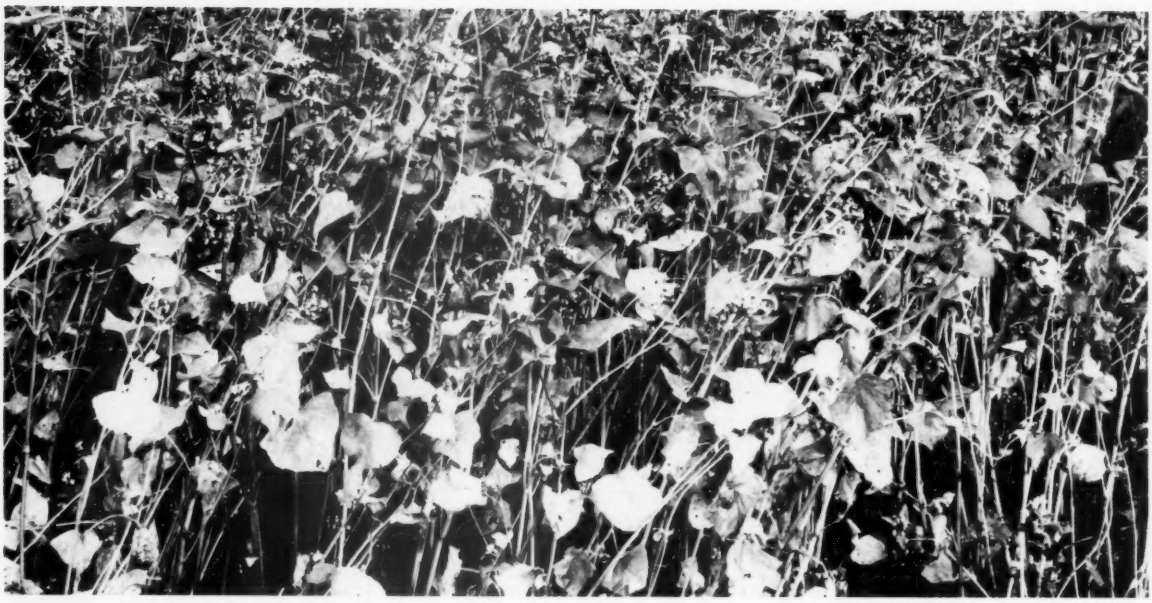
Water storage and recreational facilities for site 3A were added to the work plan in 1963, increasing the surface of the lake from 15 to 23 acres and raising the cost from $67,000 to $125,000. SCS paid a little over a third of the cost of the land, half of the cost of recreational facilities, and 95 percent of the construction cost of the lake. The golf association, city of Lindsay, and individual contributors paid the remainder.

"We met our local obligations without a tax levy or a bond issue, and the lake and adjoining area are open to the public without charge," Brown noted. The 9-hole golf course was constructed totally with local funds. Greens fees and annual dues are used to meet operating costs.

Brown said the outdoor recreational complex is a real drawing card when showing people what the Lindsay area has to offer. "Most company executives won't consider putting a plant in a town that doesn't have a golf course."

Oklahoma watershed projects have added water storage for recreational purposes to 12 structures, and projects in other states also have added recreation as a primary purpose. The people around Lindsay already know the value of including recreation in a watershed project; they get much enjoyment from the "first of its kind."—DAN F. CROOM, *information specialist, SCS, Stillwater, Okla.* ♦

A family enjoys picnicking and fishing at Lindsay Municipal Park.



The "Wetlanders"

By Laverne C. Stricker and George E. Framberger
Biologist and district conservationist, SCS, Madison and Oshkosh, Wis.

Attracting waterfowl to the Lake Winnebago area in east-central Wisconsin is the task that landowners there, known as the "Wetlanders," have given themselves. Once the area was one of the finest waterfowl habitats in the state. It is still a large waterfowl-nesting area and an important migration stop, but not the way it used to be.

A sportsman now can spend many days afield without bagging a bird. But old timers like Elmer Radtke and Ben Zimmerman of Winneconne can remember when birds used to be so plentiful that market hunting was permitted and ducks were shipped in barrels to the cities for $0.10 or $0.25 apiece.

Over the years the quantity and the quality of the water resources have deteriorated. Draining and filling, pollutants such as sediment, introduction of carp, and destruction of aquatic plants all have contributed to a loss of habitat for waterfowl. Thousands of acres of bog marsh, prime duck habitat, have been lost by fluctuating water levels which caused the bog to break loose, float out into open water, and eventually sink to the bottom in one of the four lakes forming the Winnebago pool.

The "Wetlanders" sought help from the Winnebago Soil and Water Conservation District board, which gave a high priority to their objective of restoring the waterfowl habitat to what it had been earlier. Experts from the Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, and Soil Conservation Service recommended actions that would improve the land for waterfowl.

One of the first and most important steps was protecting the marsh areas exposed to open water. Depositing quarry stone called riprap to prevent the loss of bog provided this protection. In addition, imigrating waterfowl need nesting areas and food, both near water. Members of the "Wetlanders" installed a diked area and a pumping system at several locations to supply these needs. Within the dike the land is either left in native foods or planted with crops beneficial for waterfowl. Water is pumped out in the spring and pumped back in the fall. The dike and other places are managed as nesting areas.

An 80-acre marsh adjacent to Lake Butte des Morts, too wet to cultivate, was covered by sedges and cattails that provided little waterfowl food. This area was enclosed by a ditch and dike and a two-way pump installed. It is drained about May 1 and kept dry during the growing season. Crops such as buckwheat and Japanese millet are planted. About October 1, 2 weeks before the duck season opens, the pump flow is reversed, and the crops are

A marsh crop of buckwheat (above) flooded for duck food on a former cattail marsh.

flooded to a depth of 4 to 8 inches. These abundant food supplies usually attract birds in large numbers.

SCS technical assistance has included engineering design of structures, pump capacities, and soil information to assist in selecting suitable land for the dikes and wildlife food crops.

The group is constantly looking for ways to improve operations—for example, new varieties of crops that mature early and produce food for waterfowl, agricultural practices that increase crop yields, and new and improved pumping systems.

Since areas are low and wet, it is difficult to begin working the land until mid-June. Frosts can be expected in early September so crops do not mature seed every year. Mini milo, a quick-maturing, heavily producing hybrid sorghum now is being tried with some success.

Some areas are being tiled to allow draining earlier in the spring and earlier planting of crops. Many of these areas have a permanent builtin pumping system which utilizes propeller-type pumps capable of moving a lot of water quickly. Some "Wetlanders" are now using portable pumps with similar capacities.

Hunting takes place on most of their lands, but the "Wetlanders" are more concerned about bringing waterfowl to their area than in shooting them. From spring to fall they will scan the waters, marshes, and skies for signs of birds. They hope, because of their efforts, to see many of them return. ♦

Conservation in action...

From sagebrush to waving grass

Utah

Sagebrush has been transformed to waving grass and good-quality browse on more than 50,000 acres of rangeland in the Uintah Basin Soil Conservation District of eastern Utah.

With technical assistance from the Soil Conservation Service, ranchers have aerial sprayed up to 12,000 acres of sagebrush range every year. Better management of state and private lands after spraying also has helped to make this change.

"You wouldn't believe it's the same range," said Dean Reynolds of Vernal, Utah. "Low-producing sagebrush range becomes a meadow of waving grass and healthy bitterbrush after spraying and deferring."

Sagebrush is a low forage producer but a high water user. Its deep tap root robs much water from the soil, yet offers little protection against erosion.

Ranchers have found that spraying sagebrush gives up to four times as much grazing capacity, increases stream and spring flow as much as 33 percent, and decreases the number of poisonous plants up to 80 percent. Elk, deer, grouse, and other wildlife also benefit from the improved forage grasses and sagebrush.

Ranchers have learned too that spraying should be followed with a period of no grazing—at least from the time of spraying to the fall of the next year. This no-grazing period allows the grass plants to grow and fill in the bare spaces. The additional grass produces better protection against erosion and more forage. And two or three times the number of desirable plants may result.

Aerial spraying with 2, 4-D dur-

Two years after spraying of dense sagebrush (left) a Utah range (right) is in excellent condition for livestock and wildlife.

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ing the spring planting season when rapid-growth occurs has been a very effective method of sagebrush control. Cost has varied from $2.50 to $3.75 an acre, but with good management benefits will continue for 15 to 20 years.—MARK M. PETERSEN, *district conservationist, SCS, Randolph, Utah.*

Virginia

How to make a family farm pay

Following a conservation plan can mean more income, especially when the plan includes diversified farm operations, says John T. Butler. He has been a cooperator since 1952 with the Peanut Soil and Water Conservation District in Isle of Wight County, Va.

On his 690-acre farm, Butler has been a pioneer in minimum tillage and now has a high yield of corn, silage, peanuts, soybeans, and hay as well as good protection of the land. All wet soils have been drained by 24,400 feet of tile and 11,000 feet of open ditches. In addition, he was one of the first in his area to harvest and dry peanuts, using large-scale custom drying and buying facilities. On his timberland, he follows woodland-improvement practices. And he also finds time to tend hogs and 300 beef cows.

In 1967, after several dry years, Butler decided that irrigation would increase his income. He wanted to make the farm profitable enough so that his son Johnny would come home after finishing college. With the help of the Soil Conservation Service, he planned and constructed a 20-acre lake which supplies enough water to irrigate 150 acres of high-quality pasture, corn, and peanuts. The next spring, he put in a sprinkler-irrigation system.

Butler's farm seemed complete. But then the author suggested adding campsite facilities by the lake. In winter 1968, Butler added a large swimming and beach area, rest rooms with hot and cold water, 45 campsites each with water and electricity, a large recreation area, and a commissary. He and his farm laborers did most of the work. The first summer was a success. The lake, stocked with fish, attracted many from metropolitan Hampton Roads, only 30-40 miles away.

By winter 1969, he had installed 12 more campsites with sewer, water, and electric connections for year-round campers; another rest room; an artesian well to supply water for the swimming pool and future installations; and an access road, approximately ½ mile long, which opens up 45 more of the 250 sites planned for the lake.

In 1970 a motorcycle trail and nature trail were added. Even a golf course may soon be part of the recreation complex. Johnny is now back on the farm and plans to manage the recreation enterprise.

Butler feels that campsites are a good way to make the farm pay and, at the same time, to utilize labor and equipment already on hand.

He enjoys talking with the campers and likes to show them his farm operation. He is proud that his efforts have produced something his family and nearby communities can enjoy.—HARRY O. DALTON, *soil conservation technician, SCS, Isle of Wight, Va.*

Wisconsin

No more water in the barn

"The floodwater will never run through my barn again," said Lloyd Tweseme about his new flood-detention dam. Lloyd and his son Robert farm in the upper reaches of Lake Coulee in the Trempealeau County Soil and Water Conservation District in western Wisconsin.

"You wouldn't believe it now," said Lloyd, "but back in July 1969, I had to open both barn doors as water flowed through over a foot deep." A 5-inch rain brought runoff roaring out of the 135-acre drainage area.

The large earthen dam was designed and construction supervised by the Soil Conservation Service. The structure reduces the rate of runoff coming down the valley by one-sixth and controls an active 12-foot gully that has been creeping up the valley. The eroding ditch below the dam was filled and made into a grassed waterway. The Twesemes expect a sharp reduction in pollution from sediment washing out of the ditch and filling downstream fishing holes, as well as pollution from animal wastes caused by runoff through the barnyard.

A small spring flow brings water to the 1-acre pond created by the dam. Besides many hours of fishing, swimming, and other family recreation, the pond provides wildlife habitat, especially for deer.

Gazing around the silent peaceful valley Lloyd added, "This country needs a whole lot more of this kind of dam."—OLIN C. FIMREITE, *district conservationist, SCS, Whitehall, Wis.*

Central Nevada gets new planning program

A 2-year Multicounty Comprehensive Planning Program for central Nevada began last October when a contract was signed by the Central Nevada Resource Development Authority (CNDA) with the Nevada State Planning Board.

Approximately two-thirds of the estimated $60,000 program costs will come from a Department of Housing and Urban Development "701" Planning Grant; the rest will be raised locally.

The CNDA advisory planning commission serves as the steering committee for the Central Nevada Resource Conservation and Development Project and also is the designated regional planning commission for the area. Soil conservation district supervisors, who are among the sponsors of the RC&D Project, are represented on the Authority's Advisory Planning Commission.

The new program complements objectives developed by the Central Nevada RC&D Project sponsors. It will provide more information on

needs, problems and potentials of the area. As a result local people will be in a better position to establish priorities for RC&D project measures. They also can better correlate the use of available resource conservation and development cost-sharing funds with overall area-development needs. Most project measures will be constructed under the guidance of the CNDA, and some probably will include development of outdoor water-based recreational facilities.

"Progress through cooperation" is the motto adopted by the Authority. — ALBERT NEU, *RC&D Project coordinator, SCS, Austin, Nev.* ♦

Meetings . . .

AFFCO concentrates on fire in environment

A 2-day symposium on "Fire in the Northern Environment," April 13-14, Fairbanks, Alaska, is being sponsored by the Alaska Forest Fire Council. The council represents governmental, educational, and private groups concerned with wildfire and its effects in Alaska.

The symposium will be in two sections: "Fire and the Environment" and "Fire and Man." Papers to be presented include fire-vegetation relations; fire and wildlife; fire, air, and water resources; permafrost and wildlife; effects of wildlife on the economy; fire and military operations; fire control; and state and local government.

ASAE takes up livestock wastes

An International Symposium on Livestock Wastes, sponsored by the American Society of Agricultural Engineers and Ohio State University, will take place April 19-22 in Columbus, Ohio.

Authorities in the livestock waste field will present papers on waste-disposal systems, beef feedlots, hydraulic transport of wastes, waste characteristics, economics, aerobic treatment, composting, land disposal, storage, refeeding, solid-liquid separation, and legal considerations.

Youth Science Fair Dates and places

The 14th Youth Science Fair sponsored by OPEDA and USDA will be held May 5 at Beltsville, Md. Nine students from each of five area school fairs will show their science exhibits and receive certificates for their achievements. Here is a chance for junior high and high school students of SCS employees in D.C. and neighboring Maryland and Virginia counties to show their scientific know-how—and maybe their conservation bent.

Dates and places

April 13-14, Alaska Forest Fire Council symposium, Fairbanks, Alaska.

19-22, International Symposium on Livestock Wastes, Columbus, Ohio.

21-24, Urban Land Institute, New Orleans, La.

May

2-8, Clean Waters for America Week.

3-6, Garden Clubs of America, St. Louis, Mo.

3-7, League of Women Voters of the U.S., Washington, D.C.

3-7, International Symposium on Manmade Lakes, Their Problems and Environmental Effects, Knoxville, Tenn. Organized by the Scientific Committee on Water Research (COWAR) on behalf of the International Council of Scientific Unions (ISCU).

9-12, National Forest Products Association, Washington, D.C.

16-21, National Council of State Garden Clubs, Bal Harbour, Fla.

16-23, Soil Stewardship Week.

20-24, National Audubon Society, Milwaukee, Wis.

23-26, Northeast Conservation Engineers and Northeast Fish and Wildlife Conference, Portland, Maine. ♦

Review

Nutrient Mobility in Soils: Accumulation and Losses. EDITED BY O. P. ENGELSTAD. *Soil Science Society of America, Madison, Wis., Spec. Publ. 4. 81 pp., illus. $3.00.*

This book includes five papers presented at a symposium during the 1969 annual meeting of the Soil Science Society of America.

The first paper, "Soil and Climatic Factors Which Affect Nutrient Mobility," by Grant W. Thomas, reviews the chemical and physical properties of soils and types of climate in relation to losses of nitrogen and phosphorus.

Roy W. Simonson discusses "Loss of Nutrient Elements During Soil Formation." He gives most attention to the bases and to phosphorus and shows how extensive past losses by leaching have been in humid climates.

B. A. Stewart discusses nitrates in soil, water, and plants in relation to the agricultural practices of fertilization, irrigation, and management of animal wastes.

W. H. Graham discusses an "Agricultural Nutrient Budget," pointing out mostly our lack of quantitative knowledge but emphasizing that good farming is not incompatible with good streams and lakes.

L. B. Nelson discusses the "Research Needed to Resolve the Plant Nutrient—Water Quality Issue." He points out that this is primarily a field research problem, not one for the laboratory.

These papers reflect the unsatisfactory state of our present knowledge. They show where our knowledge is weak, how we can learn the extent to which farming affects the degradation of streams and lakes, and how we can learn to manage the problems.—GUY D. SMITH, *director, Soil Survey Investigation, SCS, Washington, D.C.*

New publications

Controlling Erosion on Construction Sites. *1970. USDA Agr. Inf. Bull. 347. 30 pp., illus. $0.25.* Each year more than a million acres of land in the United States is converted from agricultural to urban use—for new houses, shopping centers, schools, industrial parks, highways, and airports needed by our growing population. Urbanizing land also is the source of much of the sediment that pollutes streams and rivers and fills lakes and reservoirs. The bulletin illustrates the damage caused when construction sites are stripped and left bare. It describes the need for selecting land through the use of soil surveys, working out a program for erosion control during the planning and design stages before plans become fixed and construction begins, and applying erosion- and sediment-control measures.

Mulches for Your Garden. By the Soil Conservation Service. *1971. USDA Home and Garden Bull. 185. 8 pp., illus.* Shows how good mulch can reduce soil blowing and washing, suppress weeds, keep the soil moist and cool, and add organic matter to the soil. Grass clippings, sawdust, straw, and compost make excellent mulches. Compost is probably the best mulch and can be made from leftover plant materials from the garden. Sawdust makes a good mulch if it is well rotted, or if 1 to 2 cups of ammonium sulfate or sodium nitrate are added to each bushel of fresh sawdust before applying the mulch.

Mulch Tillage in Modern Farming. By William A. Hayes. *1971. USDA Leaflet 554. [8] pp. illus. $0.15.* Mulch tillage leaves residues from the previous crop on or just beneath the soil surface throughout the cropping year. This leaflet presents ways and means of managing the soil for row-crop production by this method and gives factors to consider in buying equipment. Mulch tillage requires less labor, lowers production costs, conserves moisture, improves yields, makes double cropping easier, reduces erosion, and furnishes food and cover for wildlife. It does, however, lower soil temperatures and may increase pest problems.

Urban Land Policy—Selected Aspects of European Experience. *Rev. 1970. Dept. Housing and Urban Development, Office of International Affairs Spec. Apt. HUD-94-SF. 219 pp. $1.75.* Discussed are growing scarcity of land available for urban growth in Europe and actions taken by European governments; focuses briefly on increasingly close relationships with economic planning; reviews available data on major European growth patterns and considers the comparative costs of alternative forms of urban expansion; and summarizes and comments on the lessons learned from European experience.

Selected Programs From Catalog of Federal Domestic Assistance Primarily Applicable to Nonmetropolitan areas (USDA Programs not Included.) *1971. USDA Extension Service. [185 pp.]* Lists programs of the Departments of Commerce; Health, Education, and Welfare; Housing and Urban Development; Interior; Labor; Transportation; and the General Services Administration, National Credit Union Administration, Office of Economic Opportunity, and Small Business Administration.

Farmer Cooperatives . . . Farm Business Tools. By Beryle Stanton. *1970. USDA Agr. Inf. Bull. 275. 74 pp., illus. $0.45.* Presents general information on the way farmers use cooperatives to improve their farming enterprises; describes—through specific examples—how they do business; gives some of the values farmers receive by doing business cooperatively; and provides some brief historical and statistical information.

Rural Development: How USDA Helps. *1970. USDA PA-963. 14 pp., illus.* Lists rural development assistance offered by Cooperative Extension Service, Farmers Home Administration, Forest Service, Rural Electrification Administration, Soil Conservation Service, Agricultural Research Service, Agricultural Stabilization and Conservation Service, Cooperative State Research Service, Economic Research Service, and Farmer Cooperative Service.

The Economics of Clean Water. *1970. U.S. Dept. Interior, Federal Water Pollution Control Administration. Vol. I. 168 pp., illus., $1.50.* Gives current estimates of the investment levels necessary to attain water-quality standards. The report is in four parts: a summary of major findings and conclusions, details of the analysis, a profile of animal wastes, and an industrial profile of the inorganic chemicals industry.

Solid Wastes and Air Pollution. By Richard D. Vaughan. *1969. U.S. Dept. Health, Education, and Welfare, Public Health Service. 16 pp.* States that the present methods for handling and disposal of solid wastes contribute to air pollution. Stresses the need to find ways to economically recover and reuse solid waste material.

Sprinkler Irrigation. By Claude H. Pair. *Rev. 1970. USDA Leaflet 476. 8 pp., illus. $0.55.* Describes types, design, operation, and maintenance of sprinkler systems.

Profiles of Children. *1970. White House Conference on Children 1970. (U.S. Govt. Print. Off.) 187 pp., illus. $3.* A stunning chart book with tables of statistics on many phases of development and welfare of children through age 13.

Laws of the United States Relating to Water Pollution Control and Environmental Quality. Compiled by the Committee on Public Works, U.S. House of Representatives. *1970. Committee Print (91-33). 264 pp. $1.*

Soil surveys

Wake County, North Carolina. By Joel W. Cawthorn. *1970. 118 pp., illus.; maps 4 inches to the mile (1:15,840).* Soils surveyed by Joel W. Cawthorn, Van S. Jenkins, Ronald B. Stephens, William L. Shope, R. Clyde Pleasants, Daniel G. Spangler, Gordon H. Roberson, Carl E. Eby, Owen R. Demo, James R. Woodruff, John H. Lane, John P. Bryant, Robert M. Craig, Charles D. Sopher, and Don W. Goss.

Kenosha and Racine Counties, Wisconsin. By Ernest G. Link and Owen R. Demo. *1970. 113 pp., illus.; maps 4 inches to the mile (1:15,840).* Soils surveyed by Owen R. Demo, Orville R. Haszel, Dale E. Jakel, Donald C. Kurer, Ernest G. Link, Albin H. Martinson, Augustin J. Otter, Charles A. Reynolds, Joseph A. Steingraeber, Bruce Watson, Roger Weber, and others.

Cherokee and Delaware Counties, Oklahoma. By Everett L. Cole. *1970. 74 pp., illus.; maps 3.17 inches to the mile (1:20,000).* Soils surveyed in Cherokee County by Peter Warth and Dock J. Polone and in Delaware County by Everett L. Cole and Joseph A. Icenhower.

Adams County, Mississippi. By William M. Morris. *1970. 51 pp., illus.; maps 4 inches to the mile (1:15,840).* Fieldwork by William M. Morris, Jr., Allen C. Milbrandt, and Albert R. Leggett.

Litchfield County, Connecticut. By Walter N. Gonick, Arthur E. Shearin, and David E. Hill. *1970. 105 pp., illus.; maps 4 inches to the mile (1:15,840).* Soils surveyed by Walter N. Gonick, Berkeley R. Richardson, David B. Thompson, and David L. Yost.

Carbon-Emery Area, Utah. By John L. Swenson, Jr., Duaine T. Erickson, Karl M. Donaldson, and Jungi J. Shiozaki. *1970. 78 pp., illus.; maps 3.17 inches to the mile (1:20,000).*

Androscoggin and Sagadahoc Counties, Maine. By Bryce W. McEwen. *1970. 83 pp., illus.; maps 4 inches to the mile (1:15,840).* Soils surveyed by B. W. McEwen, A. P. Faust, R. B. Willey, O. L. Lavoie, Bruce Worcester, and Lee Bingham.

Talbot County, Maryland. By William U. Reybold. *1970. 84 pp., illus.; maps 4 inches to the mile (1:15,840).*

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Recon . . .

Beautification, minority group employment, and a stronger tax base were among the gifts under 3 million Christmas trees harvested in Michigan last fall. District cooperators and other landowners in 14 counties supplied Michigan's markets as well as outlets in Midwestern States, Florida, Texas, New Mexico, and California.

Reasonably priced planting stock and technical assistance for plantation owners are provided by local districts and SCS. Approximately 600 growers shared a $6 million return for the record crop. Another $3 million came to those who harvested, packaged, and transported the trees. American Indians and Mexican Americans who are in Michigan for the cherry harvest also find employment in these enterprises.

No. 1 subject

"Of all the subject matter required for education in our primary and secondary school system, nothing outranks the importance of a strong understanding of the principles involved in ecology and environmental management. I recommend that action be taken to establish requirements in this discipline for teacher certification for teaching at all levels. This discipline should be recognized as more universally important than any present required course. It should be established as a required subject in primary and secondary education in accredited school programs. I recommend that all new teachers, after 1971, be required to qualify in the subject of ecology and environment in order to be certified for a life certificate."—GOVERNOR WILLIAM L. GUY, *annual message to State Legislature, North Dakota.*

A suit is being brought against Suffolk County, N.Y., by a group which challenges the county's "ecologically unsophisticated, environmentally irresponsible" zoning regulations. Citizens claim that the ninth and 14th Constitutional amendments are violated through abridgment of their right to a livable environment. If successful, the suit would block all local land development until regulations are revised to provide for open space, pollution prevention, and "the highest and best use of each acre." *The Avant Gardener* commented (Oct. 1970 issue): "Gardeners, whose involvement with environmental restoration is uniquely personal and informed, could accomplish much to save plants, health, and the livability of the community by working with other concerned groups to similarly challenge antiquated zoning laws that permit untrammeled, destructive development."

Fish kills

"The salt marsh produces nearly 10 tons of organic matter on every acre in a year. By comparison, an average yield of wheat is about one and one half tons . . . The best hay lands in this country produce about four tons per acre per year . . . Two-thirds of the value of the commercial catch of fish and shell-fish landed on the East coast of the United States come from species that live at least part of their life cycle in the marsh-estuaries . . . At the very minimum, the country has lost over two million acres of productive shallow coastal water and marsh, more than one-quarter of the total, in the course of only thirty-two years (from 1922 to 1954) . . . Between 1954 and 1965, 45,000 acres of salt marsh were destroyed between Maine and Delaware."—JOHN AND MILDRED TEAL, *Life and Death of the Salt Marsh.*

Sculptured cliffs and islets are intermingled with pools and plantings along 15- to 18-inch berms that rim a newly landscaped lake near Los Angeles, Calif. Soil cement was used to naturalize the 7.5-mile shoreline of the 150-acre lake. Native rocks set in the cement protect the shoreline yet make the lake edges appear naturally eroded. Four inches of soil cement line the lake to curb percolation and weed growth. "Lake landscaping" is a relatively new twist on the use of soil cement, which has been used for more than 30 years to pave roads, paths, and pond bottoms.

Keep America Beautiful Day will be a high point of SOAR (Save Our American Resources), the conservation program launched this year by the Boy Scouts of America. Campaign objectives are to draw attention to environmental problems and motivate public concern and action. On June 5, 1971, Scouts will lead a nationwide 1-day litter pick-up. Whatever they collect will be stacked in conspicuous places as a way of stimulating public awareness.

Auntie Litter has put the finger on 50-odd eyesores in San Antonio, Tex., since the *San Antonio Light's* editorial writers created her to stir public awareness of the city's litter problem. The sour-faced, elderly cartoon character appears in picture stories published by the *Light.* The newspaper is determined to maintain the city's nationally recognized reputation for cleanliness. The Nation's 15th largest city twice has been judged America's cleanest city.

A cluster development approach that recognizes the value of agricultural land is being tried in Southampton, Long Island, N.Y. Under the terms of the pilot project, 80 percent of each farm involved would be deeded to the town and held in trust solely for agricultural use. The farmer would retain not only the first option to farm the property but also the right to sell or develop the remaining 20 percent as intensively as local cluster zoning regulations permit.

From the Administrator:

Rural America: wide open for what?

Some of the catchwords of our society are becoming less popular today.

To many people in town-and country America, "growth" and "development" may have an unwelcome ring—because these words may mean changes in a community and its environment that are not necessarily for the better.

- New industries, new homes, new highways and other "improvements" may make living better in some ways, but may also bring crowding and pollution and loss of valuable resources.
- New life in agricultural production may be to no avail if markets or processing facilities are not handy.
- New jobs may not necessarily accrue to the residents when a rural community gets new business activity.
- As we should have learned from past experience, any development based on one or a few resources—timber or coal, for example—may be short lived.

And as an article in **Farm Index** magazine pointed out, "Many of the people communities hope to attract may have been accustomed to better facilities than some rural communities can offer. New citizens in a town expect schools to be good enough to prepare their children for college. They take it for granted that a good library will be close by. They expect adequate police and fire protection. They assume that the services of health facilities, hospitals, and doctors are available for them and their families. Some of these community services are the very ones that are deficient in rural areas. And a community can't hope to draw and hold new people if it lacks any of these amenities of community life."

Parts of America outside our metropolitan areas do have space and abundant natural resources, a calmer pace, and some pretty fine neighbors. But rural communities need to be able to offer people more than elbow room. Today's American may not be satisfied with a nostalgic country crossroads.

Rural development, then—a major American goal to stem the tide of migration to crowded cities—is a task to be undertaken with some thought.

The Soil Conservation Service is glad to be part of the rural development process within a major Department of Agriculture effort. Conservation work has been a major factor in rural and small town development since SCS was formed in 1935. Our extensive field staff of professional conservationists helps spread Federal and many other sources of assistance to local groups, where rural development must have its real energy.

Chief among local groups in a position to aid rural development are America's 3,000 conservation districts. SCS and districts together have experience in working for environmental and economic improvement with individual landowners, groups of people, and governmental units from one small town to a group of counties covering millions of acres.

They bring a body of resource facts and ideas on what other facts are needed to assure desirable community growth.

Facts about the community's resource base are vital. So are sources of technical and financial help. But the key to desirable growth in rural America is the job a community does in choosing the kind of growth it wants—setting its goals for a better life. This is not a job alone for any governmental unit; it must include every interest group and every citizen. It must include more than conservation needs, more than social aims, more than economic considerations—more than any of these for their own sake.

It is a complex task. Choices must be made, compromises worked out. But it can be done; many small towns already have come alive. Much more of rural American can grow in a way that achieves the aims of the people who live there.

The time is now.

Kenneth E. Grant

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Aloha, bagasse—farewell wastes

Farmers near Hilo, Hawaii, have discovered they can grow Christmas trees and the Japanese vegetable, taro, on nearly barren lava rock.

They use a sugarcane waste product, bagasse, as a mulch.

In the process they draw a three-way benefit—reducing erosion, conserving water, and giving their economy a needed boost.

Conservation planning by the area's farmers with help from the Soil Conservation Service was the key. The planning provided for clearing land, planting field windbreaks, and making use of the bagasse.

The bagasse mulch helps the stony soil hold moisture. Windbreaks protect the small plants from wind damage.

Taro is interplanted in the heavily mulched soil with the Christmas trees. This system requires little weed control. The taro adds to farm income until the Christmas trees mature enough for marketing.

Directors of the Waiakea Soil and Water Conservation District have sponsored field trips to farms using the double-cropping system. This enables others to learn profitable conservation farming methods.

Mary Pea and Ida Iopa, associate district directors, say their taro crop has doubled since they began mulching. Results are proving the system useful to the commercial tree or truck farmer as well as to the backyard gardener.

"Before we started to use bagasse, we didn't get much taro," Mary Pea said. "Now we get twice as much taro and better Christmas trees."

Rain and fertilizer would leach rapidly through the unprotected top layer of the Waiakea District's stony lava land. But, district cooperators are learning that almost any fruit or vegetable can be grown successfully with the mulch.

Coffee and papaya growers say mulch reduces what they call "vertical erosion"—loss of soil material and plant nutrients caused by rainwater rapidly passing through the soil.

Disposal of the bagasse has plagued sugarcane growers for years. Now the increasing demand by truck and orchard farmers for bagasse may result in a shortage of yesterday's waste.—OTIS GRYDE, *district conservationist for Oahu, SCS, Honolulu, Hawaii.* ♦

John and Mary Pea show their high-quality taro crop to Bishop Joseph Borges of the Latter Day Saints Church in Keaukaha, a part of Hilo.

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